

**UNITED STATES DISTRICT COURT
DISTRICT OF MINNESOTA**

Rudolph Technologies, Inc., a Delaware corporation,

Plaintiff,

V.

Camtek Ltd., a foreign corporation

Defendant.

Case Number:

PLAINTIFF'S COMPLAINT FOR PATENT INFRINGEMENT

JURY DEMAND

Comes now the Plaintiff, and for its Complaint against Defendant, states and alleges as follows:

THE PARTIES AND BACKGROUND

1. Plaintiff, Rudolph Technologies, Inc. (“Rudolph”) is incorporated in the State of Delaware, having a manufacturing and other operations relating to its semiconductor inspection product line at 4900 West 78th Street, Bloomington, MN.

2. Defendant, Camtek Ltd. (“Camtek”) is a business entity incorporated under the laws of the State of Israel, having a principal place of business at 9102 Bldg., Industrial Zone, Migdal Haemek, 23000, 23105 Israel and/or Ramat Gavriel Industrial Area, Migdal-Ha'emek 23150, Israel.

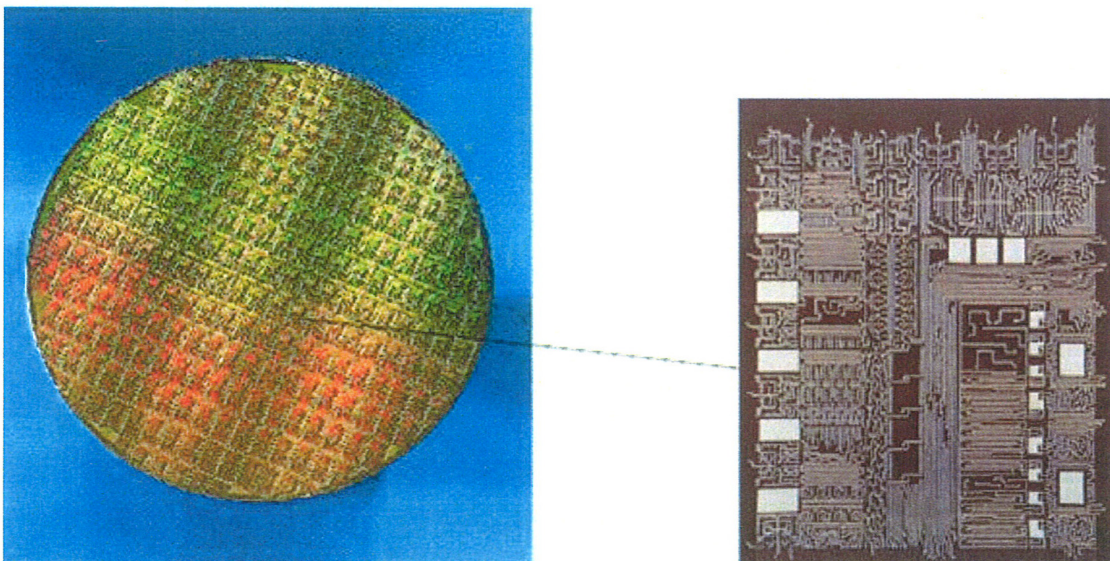
3. Rudolph is engaged in the business of making and selling automated visual inspection systems including inspection systems for semiconductor wafers in the U.S. Camtek also is engaged in the business of making and selling automated visual inspection systems including inspection systems for semiconductor wafers in the U.S. directly and, on information and belief, through its wholly-owned U.S. subsidiary and

agent Camtek USA, Inc.

4. On November 30, 2004, the U.S. Patent and Trademark Office duly and legally issued United States Patent No. 6,826,298 (hereinafter “the ’6,298 patent”) entitled AUTOMATED WAFER DEFECT INSPECTION SYSTEM AND A PROCESS OF PERFORMING SUCH INSPECTION. A true and correct copy of the ’6,298 patent is attached hereto as Exhibit A.

5. Rudolph is the owner of right, title and interest in and to the ’6,298 patent, including the right to sue and collect damages for past, present, and future infringement.

6. The ’6,298 patent revolutionized the semiconductor inspection market, enabling highly-accurate inspection of semiconductors such as finished wafers fabricated with hundreds or thousands of microchips at speeds much higher than that attained by prior systems. An example of a finished wafer is shown below on the left, with a magnified image of one of the many die on the wafer shown on the right:



7. The patented technology, including its ability to capture images of microchips at high speed through strobing illumination of a moving wafer, was an important factor in August (later Rudolph) becoming the market leader in finished-wafer inspection.

8. Camtek is engaged and competes head-to-head with Rudolph in the U.S., *inter alia*, in the business of making, using, importing, selling, and/or offering for sale automated visual inspection systems for the semiconductor industry. Camtek introduced its competitive FALCON line of inspection systems in the U.S. in or around 2004. Camtek introduced the Falcon only after it realized that the strobing technology claimed in the ‘6,298 patent dramatically increased the speed of the system, calling this discovery a “Breakthrough” as shown in the following excerpt of a Camtek document used in the prior litigation and appeal:

Breakthrough in the acceleration of BIS by illumination using Flash

- Ability to raise throughput seven-fold at least (limited camera speed and letter adaptation), order has been placed for parts (lead time 4 weeks) – Nir

9. In previous litigation, Civ. No. 05-CV-01396 (JRT/FLN), Camtek was permanently enjoined from selling and offering to sell the FALCON product line and from using the FALCON. After a long history summarized in some detail below, the Court issued final judgment including an award to Rudolph of about \$14.5 million in damages and interest and a permanent injunction on February 10, 2015. Camtek has represented in recent public statements that it has ceased selling the Falcon.

10. In the prior litigation, Camtek challenged the validity and enforceability of the ‘6,298 patent, with finality through appeal, and lost. Camtek is barred from challenging the validity or enforceability of the ‘6,298 patent again.

11. During the course of the prior litigation, the Court found by clear and convincing evidence that Camtek willfully infringed the ‘6,298 patent with respect to sales made after the jury rendered a verdict against it in 2009. Dkt. 732 at p. 6. The court noted that, after Camtek lost at trial, it offered for sale and sold an infringing FALCON machine to a U.S. based customer at a ”rock bottom price” that would “hurt Rudolph.” Id. p. 2.

12. Despite purportedly ceasing sales of its FALCON line, Camtek makes, uses, imports, sells and/or offers for sale automated visual inspection devices in the U.S., indicating in recent public statements that it has introduced a line of such products under the name EAGLE.

13. Camtek is demonstrating, offering for sale, and selling in the U.S. the EAGLE product line specifically to take market share from Rudolph. Such activities infringe the ‘6,298 patent and irreparably harm Rudolph, warranting preliminary and permanent injunctive relief.

JURISDICTION

14. This is a claim of patent infringement arising under the Acts of Congress relating to patents, 35 U.S.C. §§ 271 and 282-85.

15. This Court has jurisdiction under 28 U.S.C. §§ 1331 and 1338(a). Personal jurisdiction also exists over Camtek at least by virtue of the state long-arm statute and Fed.R.Civ.P. 4(k), and Camtek also may be sued in this district pursuant to 28 U.S.C. §§ 1391(c) and 1400(b). Camtek has sold and offered for sale semiconductor inspection systems in this district and have conducted substantial other activities related to semiconductor inspection systems also directed to Minnesota, and previously conceded personal jurisdiction exists over it in Minnesota. Camtek, through its agents, has sent

letters to Minnesota directly related to Rudolph's rights in the '6,298 patent.

**Prior Litigation Resulting in Judgment of Infringement and Injunction
Against Camtek's FALCON Inspection Systems and
Affirmance of Validity of the '6,298 Patent**

16. On July 14, 2005, August Technology Corporation ("August"), Rudolph's predecessor-in-interest in the '6,298 patent, filed a Complaint in the District Court for the District of Minnesota, alleging that Camtek infringed the '6,298 patent by selling and offering for sale an automated visual inspection device under the name FALCON. (Case No. 05-cv-01396-JRT-FLN, Dkt. No. 1.)

17. On April 12, 2006, August filed an Amended Complaint and added Rudolph as a plaintiff. (Case No. 05-cv-01396-JRT-FLN, Dkt. No. 103.) Rudolph is now the sole owner of the '6,298 patent and sole plaintiff in that case. By virtue of its ownership of the '6,298 patent, Rudolph has acquired and continues to maintain the right to sue thereon and the right to recover for infringement thereof.

18. On August 28, 2009, following a jury trial and verdict, the District Court for the District of Minnesota entered a judgment in Rudolph's favor and against Camtek that Claims 1 and 3 of the '6,298 patent are not invalid and not unenforceable and that Camtek through its FALCON automated optical inspection machine infringed claims 1 and 3 of the '6,298 patent. (Case No. 05-cv-01396-JRT-FLN, Dkt. No. 547). Based in part by the irreparable harm to Rudolph from the infringement and the "direct" competition between the parties, the Court also entered a permanent injunction regarding the FALCON machines and awarded damages of \$6,782,450, plus interest. (*Id.*)

19. On July 27, 2010, the District Court for the District of Minnesota denied Camtek's remaining five post-trial motions. (Case No. 05-cv-01396-JRT-FLN,

Dkt. No. 644.)

20. On August 10, 2010, Camtek appealed the district court's final judgment in that case "and all other orders and rulings underlying the judgment and order decided adversely to Camtek Ltd." (Case No. 05-cv-01396-JRT-FLN, Dkt. No. 650.)

21. On August 22, 2011, the Court of Appeals for the Federal Circuit issued a Judgment affirming this court's decisions that the '6,298 patent was valid and enforceable, and further that Camtek literally infringed that patent with respect to all but one element of each of claims 1 and 3. The Federal Circuit reversed in part the infringement findings based on its modification of the district court's claim construction of the terms "a wafer" and "a plurality of wafers" as found in the "visual inspection device" element of system claim 1 and the related "training" element of method claim 3, and remanded the case for "a limited trial on infringement with respect to this claim element." (Case No. 05-cv-01396-JRT-FLN, Dkt. No. 747.) The injunction and damages award were vacated in view of the remand.

22. On March 31, 2014, the District Court for the District of Minnesota granted Plaintiffs' Motion for Summary Judgment of Infringement, finding that Camtek infringed claims 1 and 3 of the '6,298 patent under the remanded claim construction at least through its offering for sale, sale, and use of FALCON system. Among other findings, the court noted that "Camtek has presented no evidence" to rebut the evidence that Camtek trained its customers to use the Falcon in a manner that infringed claim 3. (Case No. 05-cv-01396-JRT-FLN, Dkt. No. 964 at p. 37.)

23. On February 9, 2015, the District Court for the District of Minnesota denied Camtek's motion for new proceedings including a new trial on damages and

granted Rudolph's motion for a Final Judgment against Camtek, issued a new permanent injunction regarding the FALCON systems, and awarded Plaintiffs damages in the amount of \$7,428,436.00 and prejudgment interest in the amount of \$7,083,863.18, for a total award of over \$14.5 million. The court entered judgment February 10, 2015. (Case No. 05-cv-01396-JRT-FLN, Dkt. No. 1010, 1011.)

24. In response to the judgment, Camtek issued a press release indicating that it had ceased sales of the FALCON product.

**INFRINGEMENT OF U.S. PATENT NO. 6,826,298 BY
CAMTEK'S NEW EAGLE DEVICE**

25. In December 2014, Camtek Ltd. announced its first customer purchase of its EAGLE semiconductor inspection system. On information and belief, that customer is based in the U.S. and tested the EAGLE product in the U.S.

26. Camtek's press release touts that the sale was based on "Head-to-Head" competition. On information and belief, Rudolph was the only other qualified competitor for that customer, and would have sold its product to that customer but-for Camtek's sale of the new EAGLE product.

27. On February 15, 2015, days after the judgment issued, Camtek announced its fourth quarter 2014 results, including the following quotes from its CEO Mr. Amit (emphasis added):

"In 2014, our semiconductor business saw organic growth of approximately 20% year over year. As we move into 2015, we are seeing **increased traction for our EAGLE product**, focused on the advanced packaging market. We continue to achieve **qualification at leading semiconductor manufacturers to which we had not significantly penetrated in the past**. We see the potential in 2015 for

multiple orders of tools from these customers."

Concluded Mr. Amit, "Looking ahead into 2015, we expect double-digit revenue growth in our semiconductor business, driven by increased capex spending by many of our customers. . . . "

28. Camtek touts the EAGLE system as targeted to advanced packaging, including two-dimensional (2D) and three-dimensional (3D) inspection capabilities required by customers. Camtek's marketing materials nowhere indicate that the EAGLE omits any functionality of the infringing FALCON machines. To the contrary, Camtek's publicly-available information indicates the EAGLE product line is compatible with the FALCON product line. The EAGLE is also touted in Camtek's marketing materials as capable of 100% inspection of the microchips or dies fabricated on patterned wafers. The EAGLE marketing materials either directly or by reasonable inference indicate that Camtek performs the steps at least of claim 3 of the '6,298 patent with the EAGLE and that the EAGLE has the elements claimed in claim 1 of the '6,298 patent including:

--a wafer test plate;

--a wafer provider for providing a wafer to the test plate;

--a visual inspection device for visually inputting of a plurality of known good quality wafers during training and for visual inspection of other unknown quality wafers during inspection;

--at least one of a brightfield illuminator positioned approximately above, a darkfield illuminator positioned approximately above, and a darkfield laser positioned approximately about the periphery of the wafer test plate, all of which are for providing illumination to the unknown quality wafers during inspection

and at least one of which strobes to provide short pulses of light during movement of a wafer under inspection based on a velocity of the wafer;

and

--a microprocessor having processing and memory capabilities for developing a model of good quality wafer and comparing unknown quality wafers to the model.

29. While its motion for new proceedings was pending in the prior FALCON litigation, from April 2014 to February 10, 2015, Camtek urged that a new trial on damages was needed because of the possibility of noninfringing alternatives, namely that the Falcon “could be configured and operated” in a noninfringing way. Dkt. 968 at p. 13. At no time, however, did Camtek identify its EAGLE semiconductor inspection system as noninfringing or indicate that the EAGLE was configured in a noninfringing way that would evidence that the Falcon could be so configured. Camtek’s failure to cite the EAGLE technology as noninfringing further corroborates the evidence that the EAGLE infringes the ‘6,298 patent.

30. Camtek has directly infringed the ‘6,298 patent in the U.S. at least by selling and/or offering for sale the EAGLE system and by using the EAGLE system, for example, to train customers or conduct tests requested by customers.

31. On information and belief, Camtek has contributed to the infringement of the ‘6,298 patent, and/or induced infringement, by others including but not limited to via its sales-related activities (training, demonstrations, loaned systems, testing, etc.) involving the EAGLE device.

32. Defendant has actual knowledge of the ‘6,298 patent and, on

information and belief, has had actual knowledge that the use, manufacture, sale, offer for sale, and importation of the EAGLE device infringe said patent, contribute to the infringement of said patent, and/or induce the infringement of said patent by others.

33. Plaintiff has complied with the notice provisions of 35 U.S.C. § 287 at least by providing specific notice of infringement before filing and service of this complaint and/or by filing and serving Camtek with a copy of this complaint for patent infringement.

34. Camtek's EAGLE product competes head-to head with Rudolph's products in the U.S. marketplace. Rudolph is number one in selling patterned wafer semiconductor visual inspection systems in the U.S.; Camtek is number two.

35. Plaintiff has been irreparably damaged by Camtek's infringement of the '6,298 patent and will continue to be damaged in the future unless Camtek is preliminarily and permanently enjoined from infringing said patent, contributing to the infringement of said patent, and inducing the infringement of said patent by others. Camtek competes with Rudolph in the U.S. using Rudolph's own patented technology, irreparably harming Rudolph with respect to present and future business.

36. Camtek has long known about the '6,298 patent and lost its challenge to the validity of that patent. It is also well aware of the scope of the patent, which has already been adjudicated, and has already been adjudicated as an infringer of the patent. Camtek has previously willfully infringed the '6,298 patent regarding its FALCON system and been found to knowingly violate an injunction from this court related to the infringing FALCON system. Camtek has deliberately sought to harm Rudolph in the marketplace through competing with Rudolph using Rudolph's own patented technology.

Camtek's continuing infringement of the '6,298 patent through the EAGLE product is now and has been willful and will continue to be willful unless enjoined by the Court.

This case is an exceptional case under 35 U.S.C § 285.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff prays for judgment that:

- A. United States Patent No. 6,826,298 has already been found to be and continues to be duly and legally issued, valid, and enforceable;
- B. Defendant has directly infringed, contributorily infringed, and/or induced infringement of one or more claims of United States Patent No. 6,826,298 through its activities involving the EAGLE product line;
- C. Defendant's infringement of United States Patent No. 6,826,298 has been willful;
- D. Defendant, its officers, agents, servants and employees, and those persons in active concert or participation with any of them be enjoined pursuant to 35 U.S.C. § 283 from further infringing, contributing to the infringement, or inducing the infringement of United States Patent No. 6,826,298 with respect to the EAGLE and any other products which are colorable imitations thereof;
- E. An accounting be had for the damages arising out of Defendant's infringement of United States Patent No. 6,826,298, including treble damages for willful infringement as provided by 35 U.S.C. § 284, with interest;
- F. Defendant be preliminarily and permanently enjoined pursuant to 35 U.S.C. § 283 from continued use, importation, offer for sale, or sale of Defendant's EAGLE products used to infringe said patent and all other products that are colorable imitations of any of the EAGLE products;

G. Plaintiff be awarded its attorneys' fees, costs, and expenses in this action at least under 35 U.S.C. § 285 and any other applicable authority; and

H. Plaintiff be awarded such other and further relief as this Court may deem necessary and proper.

DEMAND FOR JURY TRIAL

Plaintiff hereby demands a trial by jury of all issues so triable.

Respectfully submitted,

RUDOLPH TECHNOLOGIES, INC.

By its attorneys,

Dated: March 12, 2015

/s/ Daniel W. McDonald
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